

Robin. The Western Tanager (*Piranga ludoviciana*) becomes occasionally a nuisance in the orchard, but for the most part is a resident of other districts than the fruit growing region. The Swallows, as a group, are exceptionally beneficial birds, subsisting almost wholly, at all times, upon insect food. The Vireos also subsist chiefly upon insects, and are innocent of depredations upon fruit, but they possess a fondness for coccinellid beetles, the enemies of the bark scale and plant lice. The Warblers, as would be expected, come in for unqualified praise as beneficial species, their food being not only almost wholly insectivorous but consisting largely of noxious species. The Wrens, Creepers, Nuthatches and Titmice have also an equally good record; but the Mockingbird and certain of the Thrushes, including the Robin, but not the Bluebirds, partake more or less of fruits; but the verdict, for even the Robin, is that they are far more beneficial than injurious.

This valuable report is illustrated by one colored and three plain plates of as many species of birds, drawn by Fuertes, and one illustrating the seed diet of the House Finch. The evidence here presented should go far to place the smaller birds of California in their true light of benefactors rather than foes of the orchardist and farmer, the debit and credit accounts, presented apparently with great fairness and from positive information, balancing greatly in their favor. — J. A. A.

Howell on the Relation of Birds to the Cotton Boll Weevil.¹ — This is the third report of progress on the investigation of birds in their relation to the rapidly spreading cotton boll weevil pest in Texas and Louisiana. "As a result of investigations carried on intermittently during five seasons 43 species of our native birds have been found to feed on the weevil," some of them in summer, others in winter. The results of these thus far rather limited investigations are given in detail for each species. Of the 86 species studied in this connection, just one half are boll-weevil-eating, and one half are not. But birds have been proved to be so important a check upon the spread of this pest that recommendations are presented for the legal protection of certain weevil-eating species now wholly unprotected in Texas, the erection of nesting boxes for Martins, and the dissemination of information regarding the important aid afforded by birds in holding in check this grave pest. Among the most useful species in this respect are the Flycatchers, Orioles, Blackbirds, certain of the Sparrows and Finches, the Swallows, etc. The report is illustrated with designs for Martin houses, text figures of the Barn Swallow, Kingbird and Crow-Blackbird, and a colored plate of the Baltimore and Orchard Orioles.— J. A. A.

¹ The Relation of Birds to the Cotton Boll Weevil. By Arthur Howell, Assistant Biologist, Biological Survey. U. S. Department of Agriculture, Biological Survey, Bulletin No. 29. Pp. 30, 1 colored plate (frontispiece), and 6 text figures.